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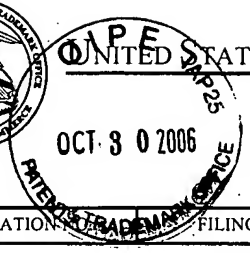

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,768	02/04/2004	David A. Horwitz	A-68983-2 (469443-65) RMS	2359

7590 10/10/2006

Richard F. Trecartin
DORSEY & WHITNEY LLP
Suite 3400
Four Embarcadero Center
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EXAMINER	
JUEDES, AMY E	

ART UNIT	PAPER NUMBER
1644	

DATE MAILED: 10/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/772,768	HORWITZ, DAVID A.	
	Examiner	Art Unit	
	Amy E. Juedes, Ph.D.	1644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 August 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The examiner of this application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Amy E. Juedes, Group Art Unit 1644, Technology Center 1600.

2. Applicant's amendment and remarks, filed 8/21/06, are acknowledged.

Claims 1-6 have been amended.
Claims 1-6 are pending and are being acted upon.

3. The objections to the title and abstract are withdrawn in view of Applicant's amendment.

4. The rejection of the claims under 112 second paragraph is withdrawn in view of Applicant's amendment.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-3 and 6 stand rejected under 35 U.S.C. 102 (e) as being anticipated by U.S. Patent No: 6,685,936 (of record).

As set forth previously, The '936 Patent teaches suppressor T cells capable of treating (i.e. decreasing) transplant rejection (see in particular column 3, lines 14-15). Further, '936 Patent teaches suppressor T cells to be CD8+ T cells (see in particular column 8, lines 23-24). However, the '936 Patent does not teach the same process of making the claimed suppressor T cells. As regards to applicant's reliance upon product-by-process limitations within the claimed methods; it is noted

that the patentability of a product does not depend on its method of production. In re Thorpe, 227 USPQ 964, 966 (Fed. Cir. 1985) See MPEP 2113. The claimed compound is the same compound as taught by the '936 patent irrespective of how it is made.

Applicant's arguments and declaration of inventor Horwitz, filed 8/21/06, have been fully considered, but they are not persuasive.

Applicant argues that, in contrast to the cells of the '936 patent, the instant cells have been shown to exhibit suppressive activity independent of CD8+ T cells. Applicant has supplied a declaration by inventor David A. Horwitz as evidence of this property of the instantly claimed cells.

The Horwitz declaration states that Examples 1 and 3 of the application describe CD4+ suppressor T cells prepared by the methods of the present invention, which have suppressive activity. The declaration further states that in contrast, the suppressive cells of the '936 patent require CD8+ T cells. However, the instant claims specifically encompass a population of suppressor T cells generated by culturing enriched CD8+ T cells. It is unclear how said suppressor cells could possibly be "independent of CD8+ T cells", when in fact they require CD8+ T cells as a starting material. The '936 patent teaches a population of CD8+ suppressor T cells capable of decreasing graft rejection, and thus meets all the limitations of the instant claims.

7. Claims 1-5 stand rejected under 35 U.S.C. 102 (b) as being anticipated by Hall et al. (of record).

As set forth previously, Hall et al. teach CD4+ suppressor T cells capable of inhibiting restoration of transplant rejection (i.e. decreasing transplant rejection) (see in particular page 154, Summary, lines 7-8). Additionally, Hall et al. teach CD4+ suppressor T cells to be CD45R (see in particular page 152, 2nd paragraph, line 1) and that CD45R$^+$ cells to be naïve cells (i.e. naïve CD4+ T cells) (see in particular page 152, 2nd paragraph, lines 14-15). However, Hall et al. do not teach the same process of making the claimed suppressor T cells. As regards to applicant's reliance upon product-by-process limitations within the claimed methods; it is noted that the patentability of a product does not depend on its method of production. In re Thorpe, 227 USPQ 964, 966 (Fed. Cir. 1985) See MPEP 2113. The claimed compound is the same compound as taught by Hall et al., irrespective of how it is made.

Applicant's arguments and declaration, filed 8/21/06, have been fully considered, but they are not persuasive.

Applicant argues that the cells taught by Hall et al. require CD8+ T cells to mediate their suppressive effect, as evidenced by the lack of prevention of graft rejection in CD8+ depleted recipients. Applicant further argues that in contrast, the instant cells exhibit suppressive activity independent of CD8+ T cells. Applicant has supplied a declaration by inventor David A. Horwitz as evidence of this property of the instantly claimed cells.

Hall et al. teach a population of suppressor cells that are CD4+. Hall et al. specifically teach that adoptive transfer of CD8+ T cells does not mediate suppression, rather CD4+ T cells alone suppress graft rejection (see page 144-145 and 150). Furthermore, Hall et al. teach that transfer of CD4+ suppressor cells prevents graft rejection in irradiated mice, which have been depleted of 95% of their CD8+ T cells (i.e. the CD4+ cells mediate suppression independently of CD8+ T cells, see Table IV and page 147). The example cited by Applicant involves an experiment where other radio-resistant CD8+ T cells were further depleted from recipient mice using an anti-CD8 antibody. Adoptive transfer of CD4+ suppressor cells in this instance results in a delay of graft rejection, but not complete protection (see Table V). Therefore, it is evident that in all aspects, the cells taught by Hall et al. do exhibit suppressive activity independent of CD8+ T cells. Firstly, the suppressive cells specifically reside in the CD4+ cell population, and not the CD8+ cell population. Furthermore, the CD4+ suppressor cells mediate suppression in irradiated hosts, which have been 95% depleted of endogenous CD8+ T cells. Additionally, in mice further depleted of radio-resistant CD8+ cells with and anti-CD8 antibody, the CD4+ suppressor T cells can still mediate a delay in graft rejection.

Furthermore, Applicant has provided even less evidence than the data presented by Hall et al. regarding the CD8+ independence of the cells of the instant claims. The Horwitz declaration cites Examples 1 and 3 of the application as evidence of CD4+ suppressor T cells that have suppressive activity independent of CD8+ T cells. Example 1 of the specification demonstrates CD4+ suppressor cells that inhibit recipient cytotoxic T cells (i.e. CD8+ T cells). Other than the fact that the cited suppressor cells are CD4+, and not CD8+ (which does not distinguish the instant cells from those of Hall et al.), it is not clear how the cells of example 1 exhibit suppressive activity "independent of CD8+ T cells". CD8+ T

cells are present in the suppression assay of example 1, in contrast to the cited Hall experiment, which involves testing the cells in mice that have been depleted of radio-resistant CD8+ cells. Additionally, example 3 of the instant specification is only a prophetic example describing how CD4+ T cells are transferred to recipients, and does not discuss CD8+ depleted recipients as taught by Hall et al. Therefore, it is not clear how the evidence provided by Applicants indicates that the instant cells exhibit suppressive activity independent of CD8+ T cells, other than that the cells themselves are not CD8+, but CD4+. Hall et al. teach a population of CD4+ suppressor T cells that inhibit transplant rejection, even in CD8+ depleted mice, and thus meet all the limitations of the instant claims.

8. No claim is allowed.

9. **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy E. Juedes, Ph.D. whose telephone number is 571-272-4471. The examiner can normally be reached on 8am - 5pm, Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Chan can be reached on 571-272-0841. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Amy E. Juedes, Ph.D.
Patent Examiner
Technology Center 1600
September 14, 2006

9/27/06
G.R. EWOLDT, PH.D.
PRIMARY EXAMINER

Substitute PTO/SB/08A (07-05)
Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Substitute for form 1449/PTO
(modified)

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 1

Complete if Known	
Application Number	10/772,768
Filing Date	February 4, 2004
First Named Inventor	Horwitz
Art Unit	1644
Examiner Name	Sanjoo Jalla
Attorney Docket Number	Docket A-68983-2 (469443-65)

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
AJ	A1	US-6368636	04-09-2002	McIntosh et al.	
AJ	A2	US-6875430	04-05-2005	McIntosh et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3] Number[4] Kind Code[5] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
	B1					

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[6]
AJ	C1	ZHENG et al. "CD4+ and CD8+ Regulatory T Cells Generated Ex Vivo with IL-2 and TGF-β Suppress a Stimulatory Graft-versus Host Disease with a Lupus-Like Syndrome *THE JOURNAL OF IMMUNOLOGY*, 2004, 172: 1531-1539	

Examiner Signature	/Amy Juedes/	Date Considered	09/14/2006

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1]Applicant's unique citation designation number (optional). [2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6] Applicant is to place a check mark here if English Language Translation is attached.